

overprints." All of the claim amendments herein are made to overcome this objection and to more clearly set forth the claimed subject matter. The claims have not been amended herein to overcome any prior art rejection.

Claims 1 and 17 were amended in the previously submitted amendment dated October 30, 2000, in response to the final official action. However, since the prior amendment has not been entered, the amendments overcoming the objections to the claims are reiterated herein. No other claim amendments are presented.

Claim Rejections

Claims 1-40 are rejected over one or more of Helinski et al. U.S. Patent No. 5,724,079 and Hawkins et al. U.S. Patent No. 5,710,582. Claims 1-40 remain pending in the application.

The rejection of claims 1-10, 12-34, and 36-40 as being anticipated by Helinski et al. is respectfully but strongly traversed. Similarly, the rejection of dependent claims 11 and 35 over a combination of Helinski et al. and Hawkins et al. is respectfully traversed. Reconsideration of these rejections is hereby respectfully solicited.

The examiner's attention is drawn to method claim 1, paragraph (a) and to the corresponding recitations in apparatus claims 2 and 17. Claim 1 recites:

printing pixels in swaths of different colours side by side in a repeating pattern in a first relative traverse of a printhead and a surface to be printed, each swath being printed in a respective block of print elements and being wider than a swath printed by a single print element.

This feature is not taught, suggested, or disclosed by either of Helinski et al. or Hawkins et al. To illustrate, column 5, line 54 through column 6, line 5 of Helinski et al. discloses printing a color line in multiple passes with the print medium incremented between each pass. In a first pass, only yellow nozzles, for example, are actuated to deposit a swath of yellow dots. The print medium is then incremented for a second pass where, for example, magenta nozzles are actuated to add magenta where required to the previously laid down swath of yellow dots.

During this same second pass, the next lower swath of yellow dots is also laid down. The print medium is then incremented again for a third pass, wherein cyan nozzles, for example, are actuated to add cyan where required to the first swath of yellow dots in order to complete the first line. The magenta nozzles are also actuated on this third pass to add magenta where required to the second yellow swath. During the same third pass, the next lower swath of yellow dots is also laid down. This process continues until all lines have been printed.

The printing technique disclosed in Helinski et al. is quite different than that recited in method claim 1 as well as in apparatus claims 2 and 17. For example, claim 1 recites that, *for each traverse*, swaths of different colors are printed *side by side* in a repeating pattern. The advantage is that, for a normal resolution print, the number of passes for completing a printing process is reduced to a number equivalent to the number of printing colors. For example, only four passes would be required for complete printing for a CMYK (cyan, magenta, yellow, black) regime. This results in a significantly lower number of passes than is required in the method described in Helinski et al. In Helinski et al., for a similar CYMK regime, at least six passes would be required to complete printing.

In addition, referring to column 7, Helinski et al. disclose a printing method wherein each line of a swath is produced in a single pass by depositing ink of all colors during that pass. This is very different than the technique recited in method claim 1 and also in apparatus claims 2 and 17. As a further note, the printhead used for this particular method in Helinski et al. does not have print elements arranged in blocks as is required to complete the method recited in claim 1 and as is required of the apparatus recited in claims 2 and 17. The block arrangement used to perform the print technique recited in claims 1, 2 and 17 enables the construction of an ink supply to the print elements to be greatly simplified.

Hawkins et al. also fail to disclose such a printing technique or such a printhead as recited in claims 1, 2, and 17. The Hawkins et al. patent has merely been cited for its apparent disclosure of full page width printing capability.

Further, page 2 of the final official action appears to equate the claim 1 recitation of “printing pixels and swaths of different colors side by side in a repeating pattern in a first relative traverse of a printhead and surface to be printed” with the requirement that the nozzles are arranged in a repeat manner. *These two features are completely different from one another.* It is important that claim recites that the *swaths* are printed side by side in a repeat manner in a single traverse.

Neither Helinski et al. nor Hawkins et al. disclose a printing technique recited in method claim 1 and in apparatus claims 2 and 17. Therefore, whether taken alone or in combination, Helinski et al. and Hawkins et al. fail to disclose, teach, or suggest each and every element of claim 1, claim 2, and claim 17. The remaining claims depend from one of these independent claims. Reconsideration and allowance of claims 1-40 are hereby solicited.

CONCLUSION

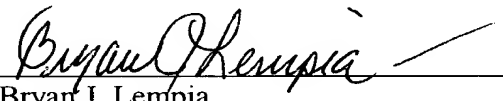
As required under 37 C.F.R. §1.116, the amendments presented herein are made to incorporate language suggested by the examiner in the final official action and therefore were not earlier presented. The applicant respectfully requests that this amendment be entered and considered based upon this showing. In fact, the amendments were presented in a prior amendment submitted after final on October 30, 2000, but that amendment has not been entered. The amendments are therefore reiterated herein.

For the foregoing reasons, it is urged that the presently pending claims 1-40, as amended, are in condition for allowance, and an early indication to that effect is solicited. Should the examiner wish to discuss the foregoing or any other matter in an effort to advance this application toward allowance, he is urged to telephone the undersigned at the indicated number.

Respectfully submitted,

MARSHALL, O'TOOLE, GERSTEIN,
MURRAY & BORUN

6300 Sears Tower
233 S. Wacker Drive
Chicago, Illinois 60606
Tel.: (312) 474-6300
Fax: (312) 474-0448


Bryan J. Lempia
Reg. No. 39,746

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